

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A method of washing fabric in a washer having a wash chamber rotatable about a horizontal axis comprising the steps:
rotating said wash chamber about its horizontal axis with fabric therein at a spin speed to effect less than a one gravity centrifugal force on said fabric such that said fabric will tumble in said wash chamber;
directing a recirculating spray of concentrated detergent solution having a concentration level in the range of 0.5 to 12% detergent by weight onto said fabric for a first period of time as said fabric is tumbling in said wash chamber;
after said first period of time, diluting said concentrated detergent solution to a lesser detergent concentration level, no less than 0.28% by weight, and spinning said wash chamber to effect less than a one gravity centrifugal force on said fabric such that said fabric will again tumble in said wash chamber;
directing a recirculating spray of said lesser concentrated detergent solution onto said fabric for a second period of time as said fabric is tumbling in said wash chamber; and
draining said lesser concentrated detergent solution from said wash chamber subsequent to said second period of time.

2. A method of washing fabric according to claim 1,
2 wherein said concentrated detergent solution is mixed prior to
being directed onto said fabric.

3. A method of washing fabric according to claim 1,
2 wherein said detergent solution is diluted after said first
period of time by adding fresh water to said detergent solution.

4. A method of washing fabric according to claim 1,
2 wherein prior to draining said lesser concentrated detergent
solution from said wash chamber, fresh water is added to cool
4 said fabric.

5. A method of washing fabric according to claim 4,
2 wherein said fresh water is recirculated through said fabric
while said fabric is caused to tumble in said wash chamber for a
4 third period of time.

6. A method of washing fabric according to claim 4,
2 wherein said fresh water is passed directly to drain while said
fabric is caused to tumble in said wash chamber.

7. A method of washing fabric according to claim 1,
2 wherein after said first period of time, but before said second
period of time said wash chamber is rotated at a spin speed to
4 effect more than a one gravity centrifugal force on said fabric
such that said fabric will be prevented from tumbling in said
6 wash chamber, and said concentrated detergent solution is
recirculated through said fabric for a period of time.

8. A method of washing fabric in a washer having a wash
2 chamber rotatable about a horizontal axis comprising the steps:
loading fabric to be washed into the wash chamber of said
4 washer;
rotating said wash chamber about its horizontal axis with
6 fabric therein at a spin speed to effect less than a
one gravity centrifugal force on said fabric such that
8 said fabric will tumble in said wash chamber;
introducing concentrated detergent solution having a
10 concentration level in the range of 0.5 to 12%
detergent by weight onto said fabric as said fabric is
12 tumbling in said wash chamber;
sensing an amount of concentrated detergent solution being
14 released from said tumbling fabric and terminating the
introduction of concentrated detergent solution into
16 said wash chamber just after said fabric has reached a
full saturation level at said spin speed;
18 directing a recirculating spray of concentrated detergent
solution onto said fabric for a first period of time as
20 said fabric is tumbling in said wash chamber;

after said first period of time, diluting said concentrated
22 detergent solution with water to a lesser detergent
concentration level, no less than 0.28% by weight, and
24 spinning said wash chamber to effect less than a one
gravity centrifugal force on said fabric such that said
26 fabric will again tumble in said wash chamber;
directing a recirculating spray of said lesser concentrated
28 detergent solution onto said fabric for a second period
of time as said fabric is tumbling in said wash
30 chamber; and
draining said lesser concentrated detergent solution from
32 said wash chamber subsequent to said second period of
time.

9. A method of washing fabric according to claim 8,
2 wherein said concentrated detergent solution is mixed prior to
being directed onto said fabric.

10. A method of washing fabric according to claim 8,
2 wherein said detergent solution is diluted after said first
period of time by adding fresh water to said detergent solution.

11. A method of washing fabric according to claim 8,
2 wherein prior to draining said lesser concentrated detergent
solution from said wash chamber, fresh water is added to cool
4 said fabric.

12. A method of washing fabric according to claim 11,
2 wherein said fresh water is recirculated through said fabric
while said fabric is caused to tumble in said wash chamber for a
4 third period of time.

13. A method of washing fabric according to claim 11,
2 wherein said fresh water is passed directly to drain while said
fabric is caused to tumble in said wash chamber.

14. A method of washing fabric according to claim 8,
2 wherein after said first period of time, but before said second
period of time said wash chamber is rotated at a spin speed to
4 effect more than a one gravity centrifugal force on said fabric
such that said fabric will be prevented from tumbling in said
6 wash chamber, and said concentrated detergent solution is
recirculated through said fabric for a period of time.

15. A method of washing fabric in a washer having a wash
2 chamber rotatable about a horizontal axis comprising the steps:
loading fabric to be washed into the wash chamber of said
4 washer;
rotating said wash chamber about its horizontal axis with
6 fabric therein at a spin speed to effect less than a
one gravity centrifugal force on said fabric such that
8 said fabric will tumble in said wash chamber;
introducing concentrated detergent solution having a
10 concentration level in the range of 0.5 to 12%
detergent by weight onto said fabric as said fabric is
12 tumbling in said wash chamber;
sensing an amount of concentrated detergent solution being
14 released from said tumbling fabric and terminating the
introduction of concentrated detergent solution into
16 said wash chamber just after said fabric has reached a
full saturation level at said spin speed;
18 directing a recirculating spray of concentrated detergent
solution onto said fabric for a first period of time as
20 said fabric is tumbling in said wash chamber;
after said first period of time, diluting said concentrated
22 detergent solution with water to a lesser detergent
concentration level, no less than 0.28% by weight, and
24 spinning said wash chamber to effect less than a one
gravity centrifugal force on said fabric such that said
26 fabric will again tumble in said wash chamber;
directing a recirculating spray of said lesser concentrated
28 detergent solution onto said fabric for a second period

of time as said fabric is tumbling in said wash
chamber;

draining said lesser concentrated detergent solution from
said wash chamber subsequent to said second period of
time;

rinsing said fabric by adding water to wash chamber;
and

spinning said wash chamber to effect removal of said rinse
water.

16. A method of washing fabric according to claim 15,
wherein said concentrated detergent solution is mixed prior to
being directed onto said fabric.

17. A method of washing fabric according to claim 15,
wherein said rinse water is recirculated through said fabric
while said fabric is caused to tumble in said wash chamber for a
third period of time.

18. A method of washing fabric according to claim 15,
wherein said rinse water is passed directly to drain while said
fabric is caused to tumble in said wash chamber.

19. A method of washing fabric according to claim 15,
2 wherein after said first period of time, but before said second
period of time said wash chamber is rotated at a spin speed to
4 effect more than a one gravity centrifugal force on said fabric
such that said fabric will be prevented from tumbling in said
6 wash chamber, and said concentrated detergent solution is
recirculated through said fabric for a period of time.